

1989 INDEX

A

Abscisic acid, growth regulator, Jul-21
 Acid rain, Nov-9
 Air pollution and crops, Jul-4
 Alfalfa, self-destructing, Feb-18
 Allelopathy tested on duckweed, Oct-9
 Alternative farming, Oct-4
 Aluminum, adapting plants to, Aug-16
 Apple scar skin viroid, May-4
 Aquaculture
 catfish farming, Feb-4
 pond-raised shrimp, Feb-9
 Ascites, poultry disease, Feb-13
 Avermectin, wool protection, May-17
 Azalea lace bug, biocontrol, Apr-14

B

Bees
 make polyester, Apr-18
 Africanized, Jan-4
 bar coded, Jan-7
 blueberry, Jun-16
 Biocontrol
 100th anniversary, Mar-4
 azalea lace bug, Apr-14
 grasshoppers, Jul-12
 Klamathweed, Mar-8
 knapweed, Jul-19
 locating insects abroad, Mar-10
 pecan weevil, Nov-21
 snakeweed, Apr-16
 starthistle, Mar-9
 Biotechnology
 gene transfer with bioblaster, Jun-14
 at EPCOT Center, Sep-8
 Blackberries, mechanical harvester, Aug-23
 Blueberries, pollenizing bee, Jun-16
 Bluetongue, shortcut for research, Mar-22
 Boll weevil, controlled by cotton plow-down, Oct-8
 Boron, possible essential nutrient, Apr-12
 Botulism, food safety, Jan-10
 Breast-feeding and nutrition, Jun-4
 Brucellosis tests, precision in, Jul-23

C

Calorimeter, room, Nov-22
 Casein, molecular structure, Jan-12
 Catfish, sex selection, Feb-4
 Catfish, disease control, Nov-26
 Cattle
 precision in Brucellosis tests, Jul-23
 predicting parasite numbers, May-16

Ceralure, medfly attractant, Feb-19
 Cheese, detecting mislabeling, Nov-26
 Chickens
 causes of ascites, Feb-13
 fat cells, Jul-23
 sugar cuts *Salmonella*, Mar-16
 Chinese pigs imported, Nov-16
 Cholesterol oxides, from cooking, Jul-22
 Cholesterol, lower with rice bran, Apr-15
 Citrus
 bitter compounds, Apr-18
 peeling technology, Jan-8
 Closed environment, growing plants in, Jun-10
 Cockroaches
 in the attic, Sep-4
 sulfuramid used on, Sep-7
 Conservation tillage, Mar-19
 Copper in diet, Jul-18
 Cotton
 drought stress, Jul-19
 plowdown controls boll weevil, Oct-8
 Cows, white blood cells fight mastitis, Feb-17
 Crops in space, Jun-10
 Cucumber, lower salt fermentation, Jan-15
 Cunaxid mite, taxonomy, Jul-7

D

Diesel fuel, grow your own, May-18
 Diet, weight loss, Nov-22
 Disney World, biotechnology lab, Sep-8
 Dogs guard sheep, Aug-12
 Downy brome controlled by *Pseudo-monas*, Mar-22
 Drill, cross-slot, Oct-14
 Drought stress
 of cotton, Jul-19
 and plant growth, Jun-10
 Duckweed, test for allelopathic chemicals, Oct-9

E

Ermine moth, biocontrol, Mar-10
 Erosion controlled by streambank plants, Aug-19
 Estrus detection in cattle, Aug-20
 Exercise, may raise protein need, May-17
 Expert system for small farmers, Oct-13

F

Farm animals of the future, Apr-4, May-10
 Fat measurement, Jan-13

Fish oil compared to soybean oil, Jan-12
 Flies, face and horn, Nov-26
 Flour, no-calorie, high fiber, Sep-15
 Fluidized bed combustion wastes, Apr-9
 Food

 safety, Jan-10
 pathogens, test selectivity, Jul-16
 adulteration detection, Nov-26
 popped nunas beans, Aug-20

Forum

How Reliable Is Our Scientific Data?, Jan-2
 Can We Scale Up Fish Farming? Feb-2
 Biological Pest Control, A Winning Strategy, Mar-2
 Potential Danger in Excess Supplements, Apr-2
 Great Expectations and Practical Realities, May-2
 Filling the Rice Bowl, Jun-2
 Where Will Tomorrow's Scientists Come From? Jul-2
 Computer Models Aid Groundwater Protection, Aug-2
 The Cockroach Controversy, Sep-2
 Sustaining Agriculture, Oct-2
 Chester G. McWhorter, Distinguished Scientist, Nov-2
 Many Success Stories Yet To Be Written, Dec-2

Fusarium, protecting crops from, Jul-8

G

Gene
 gun in biotech research, Jun-14
 transfer in walnuts, Jan-14
 Genetic engineering
 of farm animals, Apr-4
 of rice, Jun-9
 Germplasm preservation with nitrous oxide, Jul-21
 Grasshopper, biocontrol, Jul-12
 Groundwater research, May-15
 Groundwater and pastures, Sep-13

H

Herbicide-oil mix cuts herbicide rates, Mar-18
 Herbicides, natural, Feb-18
 Hormones, abscisic acid, Jul-21

I

Iron, mutant pea gluton for, Sep-14
 Iron-poor soil, adapting plants to, Aug-16
 Irrigation, precision, Aug-14

1989 INDEX

A

Abscisic acid, growth regulator, Jul-21
 Acid rain, Nov-9
 Air pollution and crops, Jul-4
 Alfalfa, self-destructing, Feb-18
 Allelopathy tested on duckweed, Oct-9
 Alternative farming, Oct-4
 Aluminum, adapting plants to, Aug-16
 Apple scar skin viroid, May-4
 Aquaculture
 catfish farming, Feb-4
 pond-raised shrimp, Feb-9
 Ascites, poultry disease, Feb-13
 Avermectin, wool protection, May-17
 Azalea lace bug, biocontrol, Apr-14

B

Bees
 make polyester, Apr-18
 Africanized, Jan-4
 bar coded, Jan-7
 blueberry, Jun-16
 Biocontrol
 100th anniversary, Mar-4
 azalea lace bug, Apr-14
 grasshoppers, Jul-12
 Klamathweed, Mar-8
 knapweed, Jul-19
 locating insects abroad, Mar-10
 pecan weevil, Nov-21
 snakeweed, Apr-16
 starthistle, Mar-9
 Biotechnology
 gene transfer with bioblaster, Jun-14
 at EPCOT Center, Sep-8
 Blackberries, mechanical harvester, Aug-23
 Blueberries, pollenizing bee, Jun-16
 Bluetongue, shortcut for research, Mar-22
 Boll weevil, controlled by cotton plow-down, Oct-8
 Boron, possible essential nutrient, Apr-12
 Botulism, food safety, Jan-10
 Breast-feeding and nutrition, Jun-4
 Brucellosis tests, precision in, Jul-23

C

Calorimeter, room, Nov-22
 Casein, molecular structure, Jan-12
 Catfish, sex selection, Feb-4
 Catfish, disease control, Nov-26
 Cattle
 precision in Brucellosis tests, Jul-23
 predicting parasite numbers, May-16

Ceralure, medfly attractant, Feb-19
 Cheese, detecting mislabeling, Nov-26
 Chickens
 causes of ascites, Feb-13
 fat cells, Jul-23
 sugar cuts *Salmonella*, Mar-16
 Chinese pigs imported, Nov-16
 Cholesterol oxides, from cooking, Jul-22
 Cholesterol, lower with rice bran, Apr-15
 Citrus
 bitter compounds, Apr-18
 peeling technology, Jan-8
 Closed environment, growing plants in, Jun-10
 Cockroaches
 in the attic, Sep-4
 sulfuramid used on, Sep-7
 Conservation tillage, Mar-19
 Copper in diet, Jul-18
 Cotton
 drought stress, Jul-19
 plowdown controls boll weevil, Oct-8
 Cows, white blood cells fight mastitis, Feb-17
 Crops in space, Jun-10
 Cucumber, lower salt fermentation, Jan-15
 Cunaxid mite, taxonomy, Jul-7

D

Diesel fuel, grow your own, May-18
 Diet, weight loss, Nov-22
 Disney World, biotechnology lab, Sep-8
 Dogs guard sheep, Aug-12
 Downy brome controlled by *Pseudo-monas*, Mar-22
 Drill, cross-slot, Oct-14
 Drought stress
 of cotton, Jul-19
 and plant growth, Jun-10
 Duckweed, test for allelopathic chemicals, Oct-9

E

Ermine moth, biocontrol, Mar-10
 Erosion controlled by streambank plants, Aug-19
 Estrus detection in cattle, Aug-20
 Exercise, may raise protein need, May-17
 Expert system for small farmers, Oct-13

F

Farm animals of the future, Apr-4, May-10
 Fat measurement, Jan-13

Fish oil compared to soybean oil, Jan-12
 Flies, face and horn, Nov-26
 Flour, no-calorie, high fiber, Sep-15
 Fluidized bed combustion wastes, Apr-9
 Food

 safety, Jan-10
 pathogens, test selectivity, Jul-16
 adulteration detection, Nov-26
 popped nunas beans, Aug-20

Forum

How Reliable Is Our Scientific Data?, Jan-2
 Can We Scale Up Fish Farming? Feb-2
 Biological Pest Control, A Winning Strategy, Mar-2
 Potential Danger in Excess Supplements, Apr-2
 Great Expectations and Practical Realities, May-2
 Filling the Rice Bowl, Jun-2
 Where Will Tomorrow's Scientists Come From? Jul-2
 Computer Models Aid Groundwater Protection, Aug-2
 The Cockroach Controversy, Sep-2
 Sustaining Agriculture, Oct-2
 Chester G. McWhorter, Distinguished Scientist, Nov-2
 Many Success Stories Yet To Be Written, Dec-2

Fusarium, protecting crops from, Jul-8

G

Gene
 gun in biotech research, Jun-14
 transfer in walnuts, Jan-14
 Genetic engineering
 of farm animals, Apr-4
 of rice, Jun-9
 Germplasm preservation with nitrous oxide, Jul-21
 Grasshopper, biocontrol, Jul-12
 Groundwater research, May-15
 Groundwater and pastures, Sep-13

H

Herbicide-oil mix cuts herbicide rates, Mar-18
 Herbicides, natural, Feb-18
 Hormones, abscisic acid, Jul-21

I

Iron, mutant pea gluton for, Sep-14
 Iron-poor soil, adapting plants to, Aug-16
 Irrigation, precision, Aug-14

1989 INDEX

K

Kearneysville, fruit research, Nov-4
Kenaf for forage, Jun-18
Klamathweed, biocontrol, Mar-8
Knapweed, biocontrol, Jul-19

L

Lactation and infant nutrition, Jun-4
Latilure, Malaysian fruit fly attractant, May-19
Linolenic acid, source of omega-3 fatty acids, Jan-12
Lysimeter, saves irrigation water, Aug-14

M

Malaysian fruit fly lure, May-19
Mangoes, hot water treatment, Jul-9
Manure
 nitrates in groundwater, Sep-13
 in triple crop system, Oct-10
Mastitis, neutrofilis, Feb-17
Meadowfoam, oilseed crop, Feb-10
Medicarpin, natural herbicide, Feb-18
Mediterranean fruit fly, new lure, Feb-19
Melon, eat-all variety, Aug-21
Mesquite, biocontrol, Apr-16
Microelectrodes in plant cells, Oct-18
Milk, protein mystery solved, Jan-12
Models
 computer, Jan-2
 Corn/Weed Bioeconomic, May-14
 PLANTEMP for wheat, Jul-15
 Weather Wizard, Aug-10
Mulcher, slot, Oct-14
Mycorrhizae, underground allies, Nov-10

N

Near infrared reflectance spectroscopy, Aug-20
Neckbands for cattle control flies, Nov-26
Nikkomycin, antibiotic for plants, Oct-19
Nitrogen
 fertilizer encapsulation, May-18
 fertilizer excess, Jul-10
 fixation, soybeans, Oct-18
No-calorie flour, Sep-15
Nomilin, citrus compound may prevent cancer, Apr-18
Nosema locustae on grasshoppers, Jul-12
Nunas, popped bean snack food, Aug-20
Nutrition research, stable isotopes, Jun-4

O

Obesity, predicting in swine, Apr-19

Omega-3 fatty acids from soybean oil, Jan-12
Orange, peeling, Jan-8
Ozone damage to crops, Jul-4

P

Papayas, hot water treatment, Jul-9
Paraplow, Oct-14
Pastures, groundwater contamination, Sep-13
Pea, glutton for iron, Sep-14
Peach aroma analyzed, Sep-14
Peachtree borer, control, Mar-14
Pecan weevil, biocontrol, Nov-21
Pecans improved through breeding, Nov-18
Pesticide resistance predicted in insects, Oct-18
Petunia, naturally insect resistant, Jun-18
Photosynthesis, partitioning, Jun-10
Pickleworm, early warning, Jun-19
Plant stress, thermal kinetic windows, Oct-17
Polyester made by wild bees, Apr-18
Potato spindle tuber viroid, May-4
Pseudomonas controls downy brome, Mar-22

R

Rain gauges, Russian, Feb-16
Rice bran lowers cholesterol, Apr-15
Rice, nutritionally enhanced, Jun-9
Root restriction and plant growth, Jun-10
Ryegrass collecting in the U.S.S.R., Nov-14

S

Salmonella, D-mannose cuts, Mar-16
Salty soils, adapting plants to, Aug-16
Sedimentation controlled by plants, Aug-19
Seeds, storage with laughing gas, Jul-21
Selenium, removal by plants, May-8
Sheep, guarded by dogs, Aug-12
Shrimp, pond-raised, Feb-9
Snakeweed, biocontrol, Apr-16
Snow measurement, Feb-16
Soil
 conditioner from power plant wastes, Apr-9
 frozen pulls water up, Feb-14
 microbes degrade chemicals, Aug-22
 pinpointing contamination, Aug-11
Soybean oil, improved quality, Sep-10
Soybeans
 breeding for early bloom, Feb-19

nitrogen fixation, Oct-18
shade stops weeds, Mar-21
Space, crops in, Jun-10
Stable isotopes in nutrition research, Jun-4
Starthistle, biocontrol, Mar-9
Stethoconus, control of azalea lace bug, Apr-14
Sugar beets
 new process for sugar, Mar-21
 storage rot fungi, May-16
Sugar, D-mannose cuts *Salmonella*, Mar-16
Sulfuramid, cockroach and ant insecticide, Sep-7
Supercritical fluid extraction, Aug-11
Sustainable agriculture, Oct-4
Sweetpotatoes, insect-resistant varieties, Nov-24
Swine
 imported from China, Nov-16
 test for obesity, Apr-19

T

Tillage, conservation, Mar-19

V

Vedalia beetle, Mar-4
Velvetleaf, toxic in grain, Feb-17
Vernonia, oilseed crop, Apr-10
Viroids, discovery, May-4
Vitamin E and aging, Feb-12
Vitamin C, lowered by excess fertilizer, Jul-10

W-Z

Walnuts, gene transfer, Jan-14
Water
 models save resources, Aug-4
 quality helped by streambank plants, Aug-19
Weather Wizard, Aug-10
Weeds
 stopped by shade, Mar-21
 toxic seeds, Feb-17
Weed-free fields not most profitable, May-14
Weight loss, Nov-22
Wheat growth predicted with PLANTEMP, Jul-15
Wool protected with avermectin, May-17
Zinc chloride keeps fruit fresh, Jun-19